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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/782,980

DATE: 03/12/2001
TIME: 10:21:57

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\03122001\I782980.raw

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ENTERED

```
   3 <110> APPLICANT: Khodadoust, Mehran M.
   4        MacBeth, Kyle J.
   5        Busfield, Samantha J.
   6        McCarthy, Sean A.
   7        Holtzman, Douglas A.
   8        Gu, Wei
   9        White, David
  10        Pan, Yang
  12 <120> TITLE OF INVENTION: NOVEL ITALY, LOR-2, STRIFE, TRASH, BDSF, LRSG, AND
  13        STMST PROTEIN AND NUCLEIC ACID MOLECULES AND USES
  14        THEREFOR
  16 <130> FILE REFERENCE: MNI-121CP
C--> 18 <140> CURRENT APPLICATION NUMBER: US/09/782,980
C--> 19 <141> CURRENT FILING DATE: 2001-02-13
  21 <150> PRIOR APPLICATION NUMBER: PCT/US00/02125
  22 <151> PRIOR FILING DATE: 2000-01-27
  24 <150> PRIOR APPLICATION NUMBER: 09/448,076
  25 <151> PRIOR FILING DATE: 1999-11-23
  27 <150> PRIOR APPLICATION NUMBER: 09/276,400
  28 <151> PRIOR FILING DATE: 1999-03-25
  30 <150> PRIOR APPLICATION NUMBER: 60/117,580
  31 <151> PRIOR FILING DATE: 1999-01-27
  33 <150> PRIOR APPLICATION NUMBER: 09/014,195
  34 <151> PRIOR FILING DATE: 1998-01-27
  36 <150> PRIOR APPLICATION NUMBER: 09/014,348
  37 <151> PRIOR FILING DATE: 1998-01-27
  39 <150> PRIOR APPLICATION NUMBER: 09/086,892
  40 <151> PRIOR FILING DATE: 1998-05-29
  42 <150> PRIOR APPLICATION NUMBER: 09/296,208
  43 <151> PRIOR FILING DATE: 1999-04-21
  45 <150> PRIOR APPLICATION NUMBER: 09/063,950
  46 <151> PRIOR FILING DATE: 1998-04-21
  48 <150> PRIOR APPLICATION NUMBER: 09/561,381
  49 <151> PRIOR FILING DATE: 2000-04-28
  51 <150> PRIOR APPLICATION NUMBER: 09/561,810
  52 <151> PRIOR FILING DATE: 2000-04-28
  54 <150> PRIOR APPLICATION NUMBER: 09/087,121
  55 <151> PRIOR FILING DATE: 1998-05-29
  57 <150> PRIOR APPLICATION NUMBER: 09/672,721
  58 <151> PRIOR FILING DATE: 2000-09-28
  60 <150> PRIOR APPLICATION NUMBER: 09/049,799
  61 <151> PRIOR FILING DATE: 1998-03-27
  63 <160> NUMBER OF SEQ ID NOS: 176
  65 <170> SOFTWARE: PatentIn Ver. 2.0
  67 <210> SEQ ID NO: 1
  68 <211> LENGTH: 991
  69 <212> TYPE: DNA
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RAW SEQUENCE LISTING   DATE: 03/12/2001
PATENT APPLICATION: US/09/782,980   TIME: 10:21:57

        Input Set : A:\seqlist.txt
        Output Set: N:\CRF3\03122001\I782980.raw

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 70 <213> ORGANISM: Homo sapiens
 72 <220> FEATURE:
 73 <221> NAME/KEY: CDS
 74 <222> LOCATION: (43)..(573)
 76 <400> SEQUENCE: 1
 77 gaattccgac aaggagcagc ccgcaagcac caagtgagag gc atg aag tta cag    54
 78                                                  Met Lys Leu Gln
 79                                                   1
 81 tgt gtt tcc ctt tgg ctc ctg ggt aca ata ctg ata ttg tgc tca gta  102
 82 Cys Val Ser Leu Trp Leu Leu Gly Thr Ile Leu Ile Leu Cys Ser Val
 83   5               10              15                  20
 85 gac aac cac ggt ctc agg aga tgt ctg att tcc aca gac atg cac cat  150
 86 Asp Asn His Gly Leu Arg Arg Cys Leu Ile Ser Thr Asp Met His His
 87              25              30                  35
 89 ata gaa gag agt ttc caa gaa atc aaa aga gcc atc caa gct aag gac  198
 90 Ile Glu Glu Ser Phe Gln Glu Ile Lys Arg Ala Ile Gln Ala Lys Asp
 91              40              45                  50
 93 acc ttc cca aat gtc act atc ctg tcc aca ttg gag act ctg cag atc  246
 94 Thr Phe Pro Asn Val Thr Ile Leu Ser Thr Leu Glu Thr Leu Gln Ile
 95          55              60              65
 97 att aag ccc tta gat gtg tgc tgc gtg acc aag aac ctc ctg gcg ttc  294
 98 Ile Lys Pro Leu Asp Val Cys Cys Val Thr Lys Asn Leu Leu Ala Phe
 99      70              75              80
101 tac gtg gac agg gtg ttc aag gat cat cag gag cca aac ccc aaa atc  342
102 Tyr Val Asp Arg Val Phe Lys Asp His Gln Glu Pro Asn Pro Lys Ile
103   85              90              95                 100
105 ttg aga aaa atc agc agc att gcc aac tct ttc ctc tac atg cag aaa  390
106 Leu Arg Lys Ile Ser Ser Ile Ala Asn Ser Phe Leu Tyr Met Gln Lys
107                 105             110                 115
109 act ctg cgg caa tgt cag gaa cag agg cag tgt cac tgc agg cag gaa  438
110 Thr Leu Arg Gln Cys Gln Glu Gln Arg Gln Cys His Cys Arg Gln Glu
111             120             125                 130
113 gcc acc aat gcc acc aga gtc atc cat gac aac tat gat cag ctg gag  486
114 Ala Thr Asn Ala Thr Arg Val Ile His Asp Asn Tyr Asp Gln Leu Glu
115             135             140                 145
117 gtc cac gct gct gcc att aaa tcc ctg gga gag ctc gac gtc ttt cta  534
118 Val His Ala Ala Ala Ile Lys Ser Leu Gly Glu Leu Asp Val Phe Leu
119     150             155             160
121 gcc tgg att aat aag aat cat gaa gta atg tcc tca gct tgatgacaag   583
122 Ala Trp Ile Asn Lys Asn His Glu Val Met Ser Ser Ala
123 165             170             175
125 gaacctgtat agtgatccag ggatgaacac ccctgtgcg gtttactgtg ggagacagcc 643
127 caccttgaag gggaaggaga tggggaaggc cccttgcagc tgaaagtccc actggctggc 703
129 ctcaggctgt cttattccgc ttgaaaatag ccaaaaagtc tactgtggta tttgtaataa 763
131 actctatctg ctgaaagggc ctgcaggcca tcctgggagt aaagggctgc cttcccatct 823
133 aatttattgt gaagtcatat agtccatgtc tgtgatgtga gccaagtgat atcctgtagt 883
135 acacattgta ctgagtggtt tttctgaata aattccatat tttacctatg aaaaaaaaaa 943
137 aaaaaaaaaa aaaccagctg agcgccggtc gctaccaaag ccgaattc          991
140 <210> SEQ ID NO: 2
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/782,980

DATE: 03/12/2001
TIME: 10:21:57

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\03122001\I782980.raw

```
141 <211> LENGTH: 177
142 <212> TYPE: PRT
143 <213> ORGANISM: Homo sapiens
145 <400> SEQUENCE: 2
146 Met Lys Leu Gln Cys Val Ser Leu Trp Leu Leu Gly Thr Ile Leu Ile
147  1               5                  10                  15
149 Leu Cys Ser Val Asp Asn His Gly Leu Arg Arg Cys Leu Ile Ser Thr
150             20                  25                  30
152 Asp Met His His Ile Glu Glu Ser Phe Gln Glu Ile Lys Arg Ala Ile
153             35                  40                  45
155 Gln Ala Lys Asp Thr Phe Pro Asn Val Thr Ile Leu Ser Thr Leu Glu
156      50                  55                  60
158 Thr Leu Gln Ile Ile Lys Pro Leu Asp Val Cys Cys Val Thr Lys Asn
159 65                  70                  75                  80
161 Leu Leu Ala Phe Tyr Val Asp Arg Val Phe Lys Asp His Gln Glu Pro
162              85                  90                  95
164 Asn Pro Lys Ile Leu Arg Lys Ile Ser Ser Ile Ala Asn Ser Phe Leu
165             100                 105                 110
167 Tyr Met Gln Lys Thr Leu Arg Gln Cys Gln Glu Gln Arg Gln Cys His
168         115                 120                 125
170 Cys Arg Gln Glu Ala Thr Asn Ala Thr Arg Val Ile His Asp Asn Tyr
171      130                 135                 140
173 Asp Gln Leu Glu Val His Ala Ala Ala Ile Lys Ser Leu Gly Glu Leu
174 145                 150                 155                 160
176 Asp Val Phe Leu Ala Trp Ile Asn Lys Asn His Glu Val Met Ser Ser
177              165                 170                 175
179 Ala
183 <210> SEQ ID NO: 3
184 <211> LENGTH: 531
185 <212> TYPE: DNA
186 <213> ORGANISM: Homo sapiens
188 <220> FEATURE:
189 <221> NAME/KEY: CDS
190 <222> LOCATION: (1)..(531)
192 <400> SEQUENCE: 3
193 atg aag tta cag tgt gtt tcc ctt tgg ctc ctg ggt aca ata ctg ata    48
194 Met Lys Leu Gln Cys Val Ser Leu Trp Leu Leu Gly Thr Ile Leu Ile
195  1               5                  10                  15
197 ttg tgc tca gta gac aac cac ggt ctc agg aga tgt ctg att tcc aca    96
198 Leu Cys Ser Val Asp Asn His Gly Leu Arg Arg Cys Leu Ile Ser Thr
199             20                  25                  30
201 gac atg cac cat ata gaa gag agt ttc caa gaa atc aaa aga gcc atc   144
202 Asp Met His His Ile Glu Glu Ser Phe Gln Glu Ile Lys Arg Ala Ile
203             35                  40                  45
205 caa gct aag gac acc ttc cca aat gtc act atc ctg tcc aca ttg gag   192
206 Gln Ala Lys Asp Thr Phe Pro Asn Val Thr Ile Leu Ser Thr Leu Glu
207      50                  55                  60
209 act ctg cag atc att aag ccc tta gat gtg tgc tgc gtg acc aag aac   240
210 Thr Leu Gln Ile Ile Lys Pro Leu Asp Val Cys Cys Val Thr Lys Asn
```

RAW SEQUENCE LISTING   DATE: 03/12/2001
PATENT APPLICATION: US/09/782,980   TIME: 10:21:57

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\03122001\I782980.raw

```
211  65                    70                    75                    80
213  ctc ctg gcg ttc tac gtg gac agg gtg ttc aag gat cat cag gag cca   288
214  Leu Leu Ala Phe Tyr Val Asp Arg Val Phe Lys Asp His Gln Glu Pro
215                   85                    90                    95
217  aac ccc aaa atc ttg aga aaa atc agc agc att gcc aac tct ttc ctc   336
218  Asn Pro Lys Ile Leu Arg Lys Ile Ser Ser Ile Ala Asn Ser Phe Leu
219                  100                   105                   110
221  tac atg cag aaa act ctg cgg caa tgt cag gaa cag agg cag tgt cac   384
222  Tyr Met Gln Lys Thr Leu Arg Gln Cys Gln Glu Gln Arg Gln Cys His
223              115                   120                   125
225  tgc agg cag gaa gcc acc aat gcc acc aga gtc atc cat gac aac tat   432
226  Cys Arg Gln Glu Ala Thr Asn Ala Thr Arg Val Ile His Asp Asn Tyr
227          130                   135                   140
229  gat cag ctg gag gtc cac gct gct gcc att aaa tcc ctg gga gag ctc   480
230  Asp Gln Leu Glu Val His Ala Ala Ala Ile Lys Ser Leu Gly Glu Leu
231  145                   150                   155                   160
233  gac gtc ttt cta gcc tgg att aat aag aat cat gaa gta atg tcc tca   528
234  Asp Val Phe Leu Ala Trp Ile Asn Lys Asn His Glu Val Met Ser Ser
235                  165                   170                   175
237  gct                                                                531
238  Ala
241  <210> SEQ ID NO: 4
242  <211> LENGTH: 153
243  <212> TYPE: PRT
244  <213> ORGANISM: Homo sapiens
246  <400> SEQUENCE: 4
247  Leu Arg Arg Cys Leu Ile Ser Thr Asp Met His His Ile Glu Glu Ser
248  1                 5                    10                    15
250  Phe Gln Glu Ile Lys Arg Ala Ile Gln Ala Lys Asp Thr Phe Pro Asn
251                   20                    25                    30
253  Val Thr Ile Leu Ser Thr Leu Glu Thr Leu Gln Ile Ile Lys Pro Leu
254              35                    40                    45
256  Asp Val Cys Cys Val Thr Lys Asn Leu Leu Ala Phe Tyr Val Asp Arg
257          50                    55                    60
259  Val Phe Lys Asp His Gln Glu Pro Asn Pro Lys Ile Leu Arg Lys Ile
260  65                    70                    75                    80
262  Ser Ser Ile Ala Asn Ser Phe Leu Tyr Met Gln Lys Thr Leu Arg Gln
263                   85                    90                    95
265  Cys Gln Glu Gln Arg Gln Cys His Cys Arg Gln Glu Ala Thr Asn Ala
266              100                   105                   110
268  Thr Arg Val Ile His Asp Asn Tyr Asp Gln Leu Glu Val His Ala Ala
269          115                   120                   125
271  Ala Ile Lys Ser Leu Gly Glu Leu Asp Val Phe Leu Ala Trp Ile Asn
272          130                   135                   140
274  Lys Asn His Glu Val Met Ser Ser Ala
275  145                   150
278  <210> SEQ ID NO: 5
279  <211> LENGTH: 178
280  <212> TYPE: PRT
```

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281 <213> ORGANISM: Homo sapiens
283 <400> SEQUENCE: 5
284 Met His Ser Ser Ala Leu Leu Cys Cys Leu Val Leu Leu Thr Gly Val
285  1               5                  10                  15
287 Arg Ala Ser Pro Gly Gln Gly Thr Gln Ser Glu Asn Ser Cys Thr His
288             20                  25                  30
290 Phe Pro Gly Asn Leu Pro Asn Met Leu Arg Asp Leu Arg Asp Ala Phe
291         35                  40                  45
293 Ser Arg Val Lys Thr Phe Phe Gln Met Lys Asp Gln Leu Asp Asn Leu
294     50                  55                  60
296 Leu Leu Lys Glu Ser Leu Leu Glu Asp Phe Lys Gly Tyr Leu Gly Cys
297 65                  70                  75                  80
299 Gln Ala Leu Ser Glu Met Ile Gln Phe Tyr Leu Glu Glu Val Met Pro
300                 85                  90                  95
302 Gln Ala Glu Asn Gln Asp Pro Asp Ile Lys Ala His Val Asn Ser Leu
303             100                 105                 110
305 Gly Glu Asn Leu Lys Thr Leu Arg Leu Arg Leu Arg Arg Cys His Arg
306             115                 120                 125
308 Phe Leu Pro Cys Glu Asn Lys Ser Lys Ala Val Glu Gln Val Lys Asn
309         130                 135                 140
311 Ala Phe Asn Lys Leu Gln Glu Lys Gly Ile Tyr Lys Ala Met Ser Glu
312 145                 150                 155                 160
314 Phe Asp Ile Phe Ile Asn Tyr Ile Glu Ala Tyr Met Thr Met Lys Ile
315             165                 170                 175
317 Arg Asn
321 <210> SEQ ID NO: 6
322 <211> LENGTH: 178
323 <212> TYPE: PRT
324 <213> ORGANISM: Artificial Sequence
326 <220> FEATURE:
327 <223> OTHER INFORMATION: Description of Artificial Sequence: Mus musculus
329 <400> SEQUENCE: 6
330 Met Pro Gly Ser Ala Leu Leu Cys Cys Leu Leu Leu Leu Thr Gly Met
331  1               5                  10                  15
333 Arg Ile Ser Arg Gly Gln Tyr Ser Arg Glu Asp Asn Asn Cys Thr His
334             20                  25                  30
336 Phe Pro Val Gly Gln Ser His Met Leu Leu Glu Leu Arg Thr Ala Phe
337         35                  40                  45
339 Ser Gln Val Lys Thr Phe Phe Gln Thr Lys Asp Gln Leu Asp Asn Ile
340     50                  55                  60
342 Leu Leu Thr Asp Ser Leu Met Gln Asp Phe Lys Gly Tyr Leu Gly Cys
343 65                  70                  75                  80
345 Gln Ala Leu Ser Glu Met Ile Gln Phe Tyr Leu Val Glu Val Met Pro
346                 85                  90                  95
348 Gln Ala Glu Lys His Gly Pro Glu Ile Lys Glu His Leu Asn Ser Leu
349             100                 105                 110
351 Gly Glu Lys Leu Lys Thr Leu Arg Met Arg Leu Arg Arg Cys His Arg
352             115                 120                 125
354 Phe Leu Lys Cys Glu Asn Lys Ser Lys Ala Val Glu Gln Val Lys Ser
```

FYI

Please Note:
Use f n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing t ensure that a c rresp nding explanation is presented in the <220> to
<223> fields of ach sequence which presents at least one n or Xaa.

<pre>
VERIFICATION SUMMARY   DATE: 03/12/2001
PATENT APPLICATION: US/09/782,980   TIME: 10:21:58

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\03122001\I782980.raw
</pre>

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L:18 M:270 C: Current Application Number differs, Replaced Application Number
L:19 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:1088 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:13
L:1088 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:13
L:1088 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:13
L:1091 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:13
L:1091 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:13
M:340 Repeated in SeqNo=13
L:1094 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:13
L:1094 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:13
L:2868 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:42
L:2868 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:42
L:2868 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:42
L:4587 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:63
L:4587 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:63
L:4587 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:63
L:4590 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:63
L:4590 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:63
M:340 Repeated in SeqNo=63
L:4611 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:64
L:4611 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:64
L:4611 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:64
L:4614 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:64
L:4614 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:64
M:340 Repeated in SeqNo=64
L:4617 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:64
L:4617 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:64
L:4639 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:65
L:4639 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:65
L:4639 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:65
L:4642 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:65
L:4642 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:65
M:340 Repeated in SeqNo=65
L:4645 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:65
L:4645 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:65
L:6061 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:76
L:6061 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:76
L:6061 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:76
L:6064 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:76
L:6064 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:76
M:340 Repeated in SeqNo=76
L:6116 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:77
L:6116 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:77
L:6116 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:77
L:7273 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:127
L:7273 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:127
L:7273 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:127
L:7307 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:128
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```
                VERIFICATION SUMMARY              DATE: 03/12/2001
                PATENT APPLICATION:  US/09/782,980    TIME: 10:21:58

                Input Set : A:\seqlist.txt
                Output Set: N:\CRF3\03122001\I782980.raw

L:7307 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:128
L:7307 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:128
L:7336 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:129
L:7336 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:129
L:7336 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:129
L:7339 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:129
L:7339 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:129
M:340 Repeated in SeqNo=129
L:8081 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:176
L:8081 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:176
L:8081 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:176
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